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# OM protein - protein search, using sw model

Run on: March 7, 2005, 06:55:26 ; Search time 84.1691 Seconds  
(without alignments)  
919.008 Million cell updates/sec

Title: US-09-939-537-31\_COPY\_1\_200  
Perfect score: 1029  
Sequence: 1 MNRGVPRHLLVLQALLP.....TWCTVLQNKQKVEFKIDIV 200

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database : A\_Geneseq.16Dec04:\*  
1: geneseqp19908:\*  
2: geneseqp19908:\*  
3: geneseqp20005:\*  
4: geneseqp20018:\*  
5: geneseqp20028:\*  
6: geneseqp20038:\*  
7: geneseqp20038:\*  
8: geneseqp20048:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1029	100.0	203	2	AAR78674
2	1029	100.0	203	2	AAR89451
3	1029	100.0	398	2	AAR78673
4	1029	100.0	398	2	AAR89450
5	1029	100.0	400	2	AAR06374
6	1029	100.0	402	1	AAP91922
7	1029	100.0	402	1	AAP94757
8	1029	100.0	458	1	AAP81990
9	1029	100.0	458	1	AAP91369
10	1029	100.0	458	2	AAR13491
11	1029	100.0	458	2	AAY39826
12	1029	100.0	458	3	AAB07769
13	1029	100.0	462	2	AAR27277
14	1029	100.0	462	2	AAR78677
15	1029	100.0	462	2	AAR89457
16	1029	100.0	462	2	AAR02214
17	1029	100.0	462	2	AAR83142
18	1029	100.0	532	2	AAR27278
19	1029	100.0	532	2	AAR78678
20	1029	100.0	532	2	AAR89458
21	1029	100.0	532	2	AAR02215
22	1029	100.0	532	2	AAR83141
23	1029	100.0	575	2	AAR27276
24	1029	100.0	575	2	AAR78676
25	1029	100.0	575	2	AAR89456

26	1029	100.0	575	2	AAW02213	AAW02213	CD4:T-cell
27	1029	100.0	575	2	AAW83140	AAW83140	Chimeric
28	1029	100.0	630	7	ADH54472	ADH54472	Human CD4
29	1029	100.0	2037	2	AAR04032	AAR04032	Full leng
30	1029	100.0	2050	2	AAR07641	AAR07641	Deduced s
31	1026	99.7	394	1	AAP93506	AAP93506	Derived s
32	1023	99.4	202	6	AAE37197	AAE37197	CD4 prot
33	1023	99.4	203	8	ADG17474	ADG17474	CD4 cell
34	1023	99.4	203	8	ADP76327	ADP76327	Domain 2
35	1023	99.4	295	2	AAR07605	AAR07605	Plasmid T
36	1023	99.4	310	2	AAR26784	AAR26784	CD4-IgG2
37	1023	99.4	310	2	AAR46680	AAR46680	CD4-kappa
38	1023	99.4	310	3	AAV85081	AAV85081	CD4-kappa
39	1023	99.4	310	4	AAE67324	AAE67324	CD4-kappa
40	1023	99.4	310	4	AAE80885	AAE80885	Human CD4
41	1023	99.4	310	6	ABG71124	ABG71124	CD4-kappa
42	1023	99.4	310	7	ADM18324	ADM18324	Human CD4
43	1023	99.4	318	2	AAR07606	AAR07606	Plasmid T
44	1023	99.4	394	2	AAV39825	AAV39825	Soluble h
45	1023	99.4	394	3	AAV88328	AAV88328	T4 glycop

## ALIGNMENTS

RESULT 1  
AAR78674  
ID AAR78674 standard; protein; 203 AA.  
AC AAR78674;  
XX  
XX  
DT 12-APR-1996 (first entry)  
XX  
XX  
DE CD4 domain DI-D2.  
XX  
XX  
KW Chimeric receptor; CD4; T-cell receptor; HIV; cytolysis;  
KM human immunodeficiency virus; adoptive immunotherapy.  
XX  
XX  
OS Homo sapiens.  
XX  
XX  
PN W09521528-A1.  
XX  
PD 17-AUG-1995.  
XX  
XX  
PP 12-JAN-1995; 95MO-US000454.  
XX  
XX  
PR 14-FEB-1994; 94US-00195395.  
XX  
XX  
PR 02-AUG-1994; 94US-00284391.  
XX  
XX  
PA (GENO) GEN HOSPITAL CORP.  
XX  
XX  
FI Seed B, Banapour B, Romeo C, Kolarus W;  
XX  
XX  
DR WPI; 1995-292893/38.  
XX  
XX  
DR N-PSDB; AAQ96104.  
XX  
XX  
PT Target cytolysis of HIV-infected cells - by chimeric CD4 receptor-bearing  
PT cells.  
XX  
XX  
PS Example 10; Fig 24; 118bp; English.  
XX  
XX  
CC Extracellular domains DI-D4 (AAR78673) or DI-D2 (AAR78674) of human CD4  
CC are used in the construction of chimeric receptors utilized in the  
CC targeted cytolysis of cells expressing HIV envelope proteins on their  
CC surface. The chimeric receptors comprise the extracellular domain (pref.  
CC amino acids 1-394 or 1-200) of CD4 linked to an intracellular portion,  
XX e.g. of T-cell receptor protein zeta  
XX  
SQ Sequence 203 AA:  
Query Match 100.0%; Score 1029; DB 2; Length 203;  
Best Local Similarity 100.0%; Pred. No. 1.5e-76;  
Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

QY 1 MNRGVPFRHLILVLTQALLPAATQGNKVVYLGKKGDTVELTCTASQKKSIOFHMKNNOIK 60
DB 1 MNRGVPFRHLILVLTQALLPAATQGNKVVYLGKKGDTVELTCTASQKKSIOFHMKNNOIK 60
QY 61 ILGNQGSFLTKGPKLNDRADRSRSLMDQGNPPLIIKNLKIEDSDTYICEVEDQKEEVQL 120
DB 61 ILGNQGSFLTKGPKLNDRADRSRSLMDQGNPPLIIKNLKIEDSDTYICEVEDQKEEVQL 120
QY 121 LVFGLTANSDDTHLLQGQSLTTLTLESPGSSPSVQCRSPRGKNIQGKTLVSQLELQDSG 180
DB 121 LVFGLTANSDDTHLLQGQSLTTLTLESPGSSPSVQCRSPRGKNIQGKTLVSQLELQDSG 180
QY 181 TWCTCTVLQNKQKVEFKIDIV 200
DB 181 TWCTCTVLQNKQKVEFKIDIV 200

```

## RESULT 2

```

AAR89451
ID AAR89451 standard; peptide; 203 AA.

```

```

AC AAR89451;
XX 26-SEP-1996 (first entry)
DT XX
DB CD4 D1-D2 domains.
XX
XX CD7; transmembrane domain; chimeric receptor; CD5; CD34; CH2; CH3; IgG1;
KW human; CD4; HIV; proteinaceous alpha-helix; T cell; B cell; neutrophil;
KM dendritic cell; therapy; mammal; infection.
XX
XX Homo sapiens.
OS
XX
XX WO9603883-A1.
PN
XX
XX 15-FEB-1996.
PD
XX
XX 26-JUL-1995; 95WO-US009468.
PF
XX
XX 02-AUG-1994; 94US-00284391.
PR 24-FEB-1995; 95US-00394388.
XX
XX (GCHO) GEN HOSPITAL CORP.
PA
XX
XX Seed B, Banapour B, Romeo C, Kolanus W;
XX
XX WPI; 1996-129034/13.
DR N-PSDB; AAT10798.
XX

```

Membrane-bound chimeric receptor comprising extracellular portion including CD4 fragment - cells expressing receptor can be used for treatment of HIV infection.

Example 10; Fig 24; 134pp; English.

This sequence represents the CD4 D1-D2 domains of CD4. This sequence is included in the membrane bound proteinaceous chimeric receptor of the invention. The extracellular portion of the chimeric receptor contains a fragment of CD4 (amino acids 1-394 or 1-200 of the CD4 sequence) which specifically recognizes and binds HIV-infected cells, but does not mediate HIV infection. The extracellular domain of the receptor is separated from the cell membrane by 48 or 72 angstroms, or by one or more proteinaceous alpha-helices. The transmembrane region of the chimeric receptor contains a portion of the CD7, CD5 or CD34 transmembrane domain. Alternatively, the extracellular portion of the receptor can also be separated from the intracellular domain by the hinge, CH2 and CH3 domains of human IgG1. The cells expressing the receptor are preferably T cells, B cells, neutrophils, or dendritic cells. The therapeutic cells expressing the chimeric receptor are administered to a mammal to treat HIV infection

Sequence 203 AA;

```

Query Match 100.0%; Score 1029; DB 2; Length 203;
Best Local Similarity 100.0%; Pred. No. 1.5e-76;
Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MNRGVPFRHLILVLTQALLPAATQGNKVVYLGKKGDTVELTCTASQKKSIOFHMKNNOIK 60
DB 1 MNRGVPFRHLILVLTQALLPAATQGNKVVYLGKKGDTVELTCTASQKKSIOFHMKNNOIK 60
QY 61 ILGNQGSFLTKGPKLNDRADRSRSLMDQGNPPLIIKNLKIEDSDTYICEVEDQKEEVQL 120
DB 61 ILGNQGSFLTKGPKLNDRADRSRSLMDQGNPPLIIKNLKIEDSDTYICEVEDQKEEVQL 120
QY 121 LVFGLTANSDDTHLLQGQSLTTLTLESPGSSPSVQCRSPRGKNIQGKTLVSQLELQDSG 180
DB 121 LVFGLTANSDDTHLLQGQSLTTLTLESPGSSPSVQCRSPRGKNIQGKTLVSQLELQDSG 180
QY 181 TWCTCTVLQNKQKVEFKIDIV 200
DB 181 TWCTCTVLQNKQKVEFKIDIV 200

```

## RESULT 3

```

AAR78673
ID AAR78673 standard; protein; 398 AA.

```

```

AC AAR78673;
XX 12-APR-1996 (first entry)
DT XX
DB CD4 domains D1-D4.
XX
XX
XX Chimeric receptor; CD4; T-cell receptor; HIV; cytolysis;
KW human immunodeficiency virus; adoptive immunotherapy.
XX
XX Homo sapiens.
OS
XX
XX WO9521528-A1.
PN
XX
XX 17-AUG-1995.
PD
XX
XX 12-JAN-1995; 95WO-US000454.
PF
XX
XX 14-FEB-1994; 94US-00195395.
PR 02-AUG-1994; 94US-00284391.
XX
XX (GCHO) GEN HOSPITAL CORP.
PA
XX
XX Seed B, Banapour B, Romeo C, Kolanus W;
XX
XX WPI; 1995-292893/38.
DR N-PSDB; AAQ96103.
XX

```

Target cytolysis of HIV-infected cells - by chimeric CD4 receptor-bearing cells.

Example 10; Fig 23; 118pp; English.

Extracellular domain D1-D4 (AAR78673) or D1-D2 (AAR78674) of human CD4 are used in the construction of chimeric receptors utilized in the targeted cytolysis of cells expressing HIV envelope proteins on their surface. The chimeric receptors comprise the extracellular domain (pref. amino acids 1-394 or 1-200) of CD4 linked to an intracellular portion, e.g. of T-cell receptor protein zeta

Sequence 398 AA;

Query Match 100.0%; Score 1029; DB 2; Length 398;  
Best Local Similarity 100.0%; Pred. No. 3.2e-76;  
Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

QY 1 MNRGVPFRHLILVLTQALLPAATQGNKVVYLGKKGDTVELTCTASQKKSIOFHMKNNOIK 60
|||||

```

```

Db      1  NMRGVPFRLHLVLTQALLPAATQGNKVVLGKKGDTVELTCTASQKSIQFHWKNSNQIK 60
Qy      61  ILGNQGSFLTKRPSKLNDRADSRSLMDQGNFPLIIKNIKIEDSDTYICEVEDQKEEVQL 120
Db      61  ILGNQGSFLTKRPSKLNDRADSRSLMDQGNFPLIIKNIKIEDSDTYICEVEDQKEEVQL 120
Qy      121  LVFGLTANSDFTHLQGSILTLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDQSG 180
Db      121  LVFGLTANSDFTHLQGSILTLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDQSG 180
Qy      181  TWCTCTVLONQKKVEFKIDIV 200
Db      181  TWCTCTVLONQKKVEFKIDIV 200

```

## RESULT 4

```

AAR89450
ID      AAR89450 standard; peptide; 398 AA.
XX
XX

```

```

AC      AAR89450;
XX
XX

```

```

DT      26-SEP-1996 (first entry)
XX
XX

```

```

DE      CD4 D1-D4 domains.
XX
XX

```

```

KM      CD7: transmembrane domain; chimeric receptor; CD5; CD34; CH2; CH3; IGGL;
KW      human; CD4; HIV; proteolaceous alpha-helix; T cell; B cell; neutrophil;
KW      dendritic cell; therapy; mammal; infection.
XX
XX

```

```

OS      Homo sapiens.
XX
XX

```

```

PN      WO9603883-A1.
XX
XX

```

```

PD      15-FEB-1996.
XX
XX

```

```

PF      26-JUL-1995; 95WO-US009468.
XX
XX

```

```

PR      02-AUG-1994; 94US-00284391.
XX
XX

```

```

PR      24-FEB-1995; 95US-00394388.
XX
XX

```

```

PA      (GEHO ) GEN HOSPITAL CORP.
XX
XX

```

```

PI      Seed B, Banapour B, Romeo C, Kolanus W;
XX
XX

```

```

DR      WPI; 1996-129034/13.
XX
XX

```

```

DR      N-PSDB; AAT10797.
XX
XX

```

```

PT      Membrane-bound chimeric receptor comprising extracellular portion
PT      including CD4 fragment - cells expressing receptor can be used for
PT      treatment of HIV infection.
XX
XX

```

```

PS      Example 10; Fig 23; 134pp; English.
XX
XX

```

```

CC      This sequence represents the D1-D4 domains of CD4. This sequence is
CC      included in the membrane bound proteolaceous chimeric receptor of the
CC      invention. The extracellular portion of the chimeric receptor contains a
CC      fragment of CD4 (amino acids 1-394 or 1-200 of the CD4 sequence) which
CC      specifically recognises and binds HIV-infected cells, but does not
CC      mediate HIV infection. The extracellular domain of the receptor is
CC      separated from the cell membrane by 48 or 72 angstroms, or by one or more
CC      proteolaceous alpha-helices. The transmembrane region of the chimeric
CC      receptor contains a portion of the CD7, CD5 or CD34 transmembrane domain.
CC      Alternatively, the extracellular portion of the receptor can also be
CC      separated from the intracellular domain by the hinge, CH2 and CH3 domains
CC      of human IgG1. The cells expressing the receptor are preferably T cells,
CC      B cells, neutrophils, or dendritic cells. The therapeutic cells
CC      expressing the chimeric receptor are administered to a mammal to treat
CC      HIV infection
XX
XX

```

```

SQ      Sequence 398 AA;
XX
XX

```

```

Query Match      100.0%; Score 1029; DB 2; Length 398;
Best Local Similarity 100.0%; Pred. No. 3, 2e-76;

```

```

Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      1  NMRGVPFRLHLVLTQALLPAATQGNKVVLGKKGDTVELTCTASQKSIQFHWKNSNQIK 60
Db      1  NMRGVPFRLHLVLTQALLPAATQGNKVVLGKKGDTVELTCTASQKSIQFHWKNSNQIK 60
Qy      61  ILGNQGSFLTKRPSKLNDRADSRSLMDQGNFPLIIKNIKIEDSDTYICEVEDQKEEVQL 120
Db      61  ILGNQGSFLTKRPSKLNDRADSRSLMDQGNFPLIIKNIKIEDSDTYICEVEDQKEEVQL 120
Qy      121  LVFGLTANSDFTHLQGSILTLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDQSG 180
Db      121  LVFGLTANSDFTHLQGSILTLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDQSG 180
Qy      181  TWCTCTVLONQKKVEFKIDIV 200
Db      181  TWCTCTVLONQKKVEFKIDIV 200

```

## RESULT 5

```

AAR06374
ID      AAR06374 standard; protein; 400 AA.
XX
XX

```

```

AC      AAR06374;
XX
XX

```

```

DT      31-OCT-2002 (revised)
DT      20-DEC-1990 (first entry)
XX
XX

```

```

DE      Truncated form of soluble T4 encoded by PBG381.
XX
XX

```

```

KM      plasmid PBG381; soluble T4 protein; AIDS; ARC; HIV.
KW
KW

```

```

OS      Synthetic.
XX
XX

```

```

FH      Key
FT      Peptide
XX
XX

```

```

FT      Location/Qualifiers
FT      1..23
FT      /label= secretory signal
FT      /note= "hydrophobic"
XX
XX

```

```

FT      Region
FT      24..117
FT      /label= extracellular
FT      /note= "homology to V-regions"
XX
XX

```

```

FT      Region
FT      118..132
FT      /label= extracellular
FT      /note= "homology to J-regions"
XX
XX

```

```

FT      Region
FT      133..397
FT      /label= extracellular
FT      /note= "glycosylated"
XX
XX

```

```

PN      WO9008198-A.
XX
XX

```

```

PD      26-JUL-1990.
XX
XX

```

```

PF      18-JAN-1989; 89US-00300096.
XX
XX

```

```

PR      18-JAN-1989; 89US-00300096.
XX
XX

```

```

PR      (HARD ) HARVARD COLLEGE.
XX
XX

```

```

PI      Letylin NA;
XX
XX

```

```

DR      WPI; 1990-254040/33.
XX
XX

```

```

DR      N-PSDB; AAQ05608.
XX
XX

```

```

PT      Treating or preventing AIDS, ARC or HIV infection - by administering an
PT      immunologically effective amt. of soluble T4 protein.
XX
XX

```

```

PS      Disclosure; Fig 2; 121pp; English.
XX
XX

```

```

CC      T4-encoding plasmid PBG381 was used to transform Chinese Hamster Ovary
CC      cells for the production of truncated T4. Soluble T4 is produced by the
CC      virtue of the removal of the transmembrane and cytoplasmic domains. The
CC      soluble forms may be modified to increase their immunogenicity by
CC      addition of an adjuvant such as incomplete Freund's adjuvant. The T4

```

CC Interferes with HIV/T4 interaction and elicits anti-soluble T4 antibody  
 CC production. See also AA05607. (Updated on 31-OCT-2002 to add missing OS  
 CC field.)  
 CC XX  
 CC XX  
 SQ Sequence 400 AA;

Query Match 100.0%; Score 1029; DB 2; Length 400;  
 Best Local Similarity 100.0%; Pred. No. 3.2e-76;  
 Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNRGVPFRHLILVQLALPAATQGNKVYLGKKGDVVELTCTASQKKSIOFHMKNSNOIK 60  
 DB 1 MNRGVPFRHLILVQLALPAATQGNKVYLGKKGDVVELTCTASQKKSIOFHMKNSNOIK 60  
 QY 61 ILGNQGSFLTKGPKSLNDRADSRSLMDQGNFPLIIKNLKIEDSDTYICEVEDQKEEVQL 120  
 DB 61 ILGNQGSFLTKGPKSLNDRADSRSLMDQGNFPLIIKNLKIEDSDTYICEVEDQKEEVQL 120  
 QY 121 LVFGILTANSDTHLQGSILTLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELQDSG 180  
 DB 121 LVFGILTANSDTHLQGSILTLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELQDSG 180  
 QY 181 TWTCTVLQNKVKVEFKIDIV 200  
 DB 181 TWTCTVLQNKVKVEFKIDIV 200

RESULT 6  
 AAP91922  
 ID AAP91922 standard; protein; 402 AA.  
 XX  
 AC AAP91922;

XX 25-MAR-2003 (revised)  
 DT 31-OCT-2002 (revised)  
 DT 14-MAY-1990 (first entry)

XX Sequence of a secreted form of the CD4 adhesion (CD4T) polypeptide.

XX CD4 variants; CD4T; gp120; plasmid pRKC4; HIV-1; HTLV-IIIB.

XX Homo sapiens.

XX Key Location/Qualifiers

XX Misc-difference 25..26 /note= "signal processing site"

XX Misc-difference 366 /note= "other forms of CD4T terminate here"

XX Misc-difference 368 /note= "other forms of CD4T terminate here"

XX EPJ14317-A.

XX 03-MAY-1989.

XX 03-OCT-1988; 88EP-00309194.

XX 02-OCT-1987; 87US-00104329.

XX 28-SEP-1988; 88US-00250785.

XX (GETH ) GENENTECH INC.

XX Capon DJ, Gregory TJ;

XX WPI; 1989-131855/18.

XX N-PSDB; AAN90777.

XX Compns. contg. adhesion variants - useful in therapy and diagnostics,  
 PT e.g. CD4 variants which are therapeutically useful for treating human  
 PT immuno-deficiency virus.  
 XX  
 XX  
 XX

XX Disclosure; Fig 1a-1c; 36pp; English.

CC It may be capable of binding gp120. It may be fused with an  
 CC immunoglobulin constant domain, human transferrin, apolipoprotein,  
 CC albumin, ricin A chain or diphtheria toxin A. It may be used for  
 CC antiviral of immunomodulatory therapy particularly in treatment of HIV  
 CC infection. It may have variants by insertion, substitution of deletion in  
 CC non-functional regions. (Updated on 31-OCT-2002 to add missing OS field.)  
 CC (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to  
 CC correct PI field.)  
 CC XX  
 CC XX  
 SQ Sequence 402 AA;

Query Match 100.0%; Score 1029; DB 1; Length 402;  
 Best Local Similarity 100.0%; Pred. No. 3.3e-76;  
 Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNRGVPFRHLILVQLALPAATQGNKVYLGKKGDVVELTCTASQKKSIOFHMKNSNOIK 60  
 DB 1 MNRGVPFRHLILVQLALPAATQGNKVYLGKKGDVVELTCTASQKKSIOFHMKNSNOIK 60  
 QY 61 ILGNQGSFLTKGPKSLNDRADSRSLMDQGNFPLIIKNLKIEDSDTYICEVEDQKEEVQL 120  
 DB 61 ILGNQGSFLTKGPKSLNDRADSRSLMDQGNFPLIIKNLKIEDSDTYICEVEDQKEEVQL 120  
 QY 121 LVFGILTANSDTHLQGSILTLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELQDSG 180  
 DB 121 LVFGILTANSDTHLQGSILTLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELQDSG 180  
 QY 181 TWTCTVLQNKVKVEFKIDIV 200  
 DB 181 TWTCTVLQNKVKVEFKIDIV 200

RESULT 7  
 AAP94757  
 ID AAP94757 standard; protein; 402 AA.  
 XX  
 AC AAP94757;

XX 25-MAR-2003 (revised)  
 DT 03-OCT-2002 (revised)  
 DT 28-JAN-1991 (first entry)

XX Sequence of a secreted form of the CD4 adhesion.

XX HIV; antiviral; therapy; diagnosis.

XX Homo sapiens.

XX Key Location/Qualifiers

XX Peptide 1..25 /note= "signal"

XX Protein 26..402

XX MO8902922-A.

XX 06-APR-1989.

XX 03-OCT-1988; 88WO-US003414.

XX 02-OCT-1987; 87US-00104329.

XX 28-SEP-1988; 88US-00250785.

XX (GETH ) GENENTECH INC.

XX Capon DJ, Gregory TJ;

XX WPI; 1989-114397/15.

XX N-PSDB; AAN90734.

XX New nucleic acid sequences encoding adhesion, esp. CD 4, variants -  
 PT partic. with trans-membrane domain inactivated or fused to other peptide,  
 PT useful esp. for treating HIV infections.  
 XX  
 XX  
 XX

PS Disclosure; Fig 1a-1c; 78pp; English.

XX The patent claims a nucleic acid encoding an aa sequence variant of an  
 CC adhesion, which is pref. a CD4 polypeptide variant modified such that its  
 CC transmembrane domain has been inactivated, either deleted or replaced by  
 CC a sequence of hydrophilic hydrophobic profile. The aa sequence variant of  
 CC an adhesion may also be a fusion of CD4 with a 2nd polypeptide esp. one  
 CC contg. a non-CD4 epitope; a signal sequence; a cpd. able to elicit a  
 CC humoral immune response (viral polypeptide or allergen); or a human  
 CC plasma protein of long plasma half-life. CD4 fusion proteins can have  
 CC antiviral and immunomodulatory activity and are esp. useful for treating  
 CC HIV infections regardless of genetic variation within the virus. They and  
 CC antibodies raised against them can also be used diagnostically for  
 CC assaying adhesions and their ligands. (Updated on 03-OCT-2002 to add  
 CC missing OS field.) (Updated on 25-MAR-2003 to correct PR field.) (Updated  
 CC on 25-MAR-2003 to correct PA field.)

XX Sequence 402 AA;

Query Match 100.0%; Score 1029; DB 1; Length 402;  
 Best Local Similarity 100.0%; Pred. No. 3.3e-76;  
 Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNRGVFRRLLVLTQALPAATQGNKVVLGKKGDTVELTCTASQKKSIOFHKNSNQIK 60  
 DB 1 MNRGVFRRLLVLTQALPAATQGNKVVLGKKGDTVELTCTASQKKSIOFHKNSNQIK 60  
 QY 61 IIGNGSSFITKGPSKLNDRADSRSLMDGNPFLIKNLKIDSDTYICEVEDQKEEVOL 120  
 DB 61 IIGNGSSFITKGPSKLNDRADSRSLMDGNPFLIKNLKIDSDTYICEVEDQKEEVOL 120  
 QY 121 LVFGLTANSDTHLQGSILTLTLESPGSSPVQCRSPRGKNIQSGKTLVSQLELDSDG 180  
 DB 121 LVFGLTANSDTHLQGSILTLTLESPGSSPVQCRSPRGKNIQSGKTLVSQLELDSDG 180  
 QY 181 TWTCTVLQNGKVEFKIDIV 200  
 DB 181 TWTCTVLQNGKVEFKIDIV 200

RESULT 8  
 AAP81990  
 ID AAP81990 standard; protein; 458 AA.

XX AAP81990;  
 AC 25-MAR-2003 (revised)  
 DT 15-OCT-1990 (first entry)  
 XX  
 DE Clone pT4B encoded HIV T4 glycoprotein.  
 KW Human Immunodeficiency Virus T4 envelope glycoprotein; AIDS; 88.  
 OS Synthetic.  
 XX  
 FT Key Location/Qualifiers  
 FT Peptide 1..23  
 FT Region /label= leader peptide  
 FT Region 24..117  
 FT Region /label= variable-like region 1  
 FT Region 118..134  
 FT Region /label= joining-like region 1  
 FT Region 135..169  
 FT Region /label= variable-like region 2  
 FT Region 190..205  
 FT Region /label= joining-like region 2  
 FT Region 206..287  
 FT Region /label= variable-like region 3  
 FT Region 288..309  
 FT Modified-site /label= joining-like region 3  
 FT 297..299  
 FT /label= putative N-glycosylation site  
 FT Region 310..377

FT /label= variable-like region 4  
 FT Modified-site 325..327  
 FT /label= putative N-glycosylation site  
 FT Region 378..397  
 FT /label= joining-like region 4  
 FT Region 398..420  
 FT /label= trans-membrane region  
 FT Region 421..458  
 FT /label= cytoplasmic region

XX WO8801304-A.  
 XX 25-FEB-1988.  
 XX 20-AUG-1987; 87WO-US002050.  
 XX 21-AUG-1986; 86US-00898587.

XX (UYCO-) COLUMBIA UNIV.  
 PA (MADDON) MADDON P J.

PI Litman DR, Maddon PJ, Chess L, Axel R, Weiss R, McDougal JS;  
 XX WPI; 1988-064019/09.  
 DR N-PSDB; AAN80512.

PT Nucleic acid encoding T4 glyco.protein - used for treatment of AIDS and  
 PS producing antibodies for use as vaccine for immunisation against AIDS.  
 XX Disclosure; Page 7; 128pp; English.

CC T4 protein encoded by part of 3kb insert from human T cell library  
 CC (pT4B). (Updated on 25-MAR-2003 to correct PA field.)

XX Sequence 458 AA;

Query Match 100.0%; Score 1029; DB 1; Length 458;  
 Best Local Similarity 100.0%; Pred. No. 3.8e-76;  
 Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNRGVFRRLLVLTQALPAATQGNKVVLGKKGDTVELTCTASQKKSIOFHKNSNQIK 60  
 DB 1 MNRGVFRRLLVLTQALPAATQGNKVVLGKKGDTVELTCTASQKKSIOFHKNSNQIK 60  
 QY 61 IIGNGSSFITKGPSKLNDRADSRSLMDGNPFLIKNLKIDSDTYICEVEDQKEEVOL 120  
 DB 61 IIGNGSSFITKGPSKLNDRADSRSLMDGNPFLIKNLKIDSDTYICEVEDQKEEVOL 120  
 QY 121 LVFGLTANSDTHLQGSILTLTLESPGSSPVQCRSPRGKNIQSGKTLVSQLELDSDG 180  
 DB 121 LVFGLTANSDTHLQGSILTLTLESPGSSPVQCRSPRGKNIQSGKTLVSQLELDSDG 180  
 QY 181 TWTCTVLQNGKVEFKIDIV 200  
 DB 181 TWTCTVLQNGKVEFKIDIV 200

RESULT 9  
 AAP91369  
 ID AAP91369 standard; protein; 458 AA.

XX AAP91369;  
 AC 24-OCT-2003 (revised)  
 DT 25-MAR-2003 (revised)  
 DT 08-JAN-1990 (first entry)  
 XX  
 DE T4 protein.  
 KW T4 protein; human immunodeficiency virus; AIDS; clone pT4B.  
 OS Homo sapiens; (human).

	Key	Location/Qualifiers
FT	Domain	1..23
FT	Domain	24..117
FT	Region	41
FT	Region	109
FT	Domain	118..134
FT	Domain	135..189
FT	Region	155
FT	Region	184
FT	Domain	190..204
FT	Domain	205..286
FT	Domain	287..309
FT	Binding-site	296..298
FT	Domain	310..376
FT	Binding-site	325..327
FT	Region	328
FT	Region	370
FT	Domain	377..397
FT	Domain	398..420
FT	Domain	421..458
XX		
EP30227-A.		
PD	30-AUG-1989.	
XX		
PF	24-FEB-1989; 89EP-00103297.	
XX		
PR	24-FEB-1988; 88US-00160348.	
XX		
PA	(UYCO-) COLUMBIA UNIV.	
PA	(SMIK ) SWITKLINE BECKMAN CORP.	
PA	(UYCO ) UNITV COLUMBIA NEW YORK.	
PA	(UYCO ) UNITV COLUMBIA NEW YORK.	
XX		
P1	Maddon PJ, Axel R, Sweet RW, Artinos J;	
XX		
DR	WPI; 1989-250337/35.	
XX		
PT	Soluble T4 polypeptide derivs. - inhibitors of extracellular and cell to cell spread of HIV used in prevention and treatment of AIDS.	
XX		
XX	Claim 1; Fig 6; 73pp; English.	
CC	T4 protein (AAN90619) inhibits extracellular and cell-to-cell spread of HIV. The therapeutic agent consists of amino acids +3-+185 fused to +351-+369; +3e therapeutically fused to +351-+369; or +3-+185. Also used to identify inhibitors of T4 interactions, as target carrier proteins, and to generate monoclonal antibodies. Above features are: Domain 1 (D); starting at the N-terminal = Leader; D2 = variable-like-1; D3 = joining-like-1; CC D4 = V2; D5 = J2; D5 = V3; D6 = J3; D7 = V4; D8 = U4; D9 = transmembrane; CC D10 = cytoplasmic; Regions are extracellular cysteines; and the 2 sites are potential N-linked glycosylation sites. (Updated on 25-MAR-2003 to correct PA field.) (Updated on 24-OCT-2003 to standardise OS field)	
CC		
CC		
XX		
QO	Sequence 458 AA;	
Query Match	100.0%; Score 1029; DB 1; Length 458;	
Best Local Similarity	100.0%; Pred.No. 3.8e-76;	
Matches 200; Conservative	0; Mismatches 0; Indels 0; Gaps 0	
Dn	1 NRNGVPFRHLVLTLALPPATOGKNVYLGKKGTVELTCTASOKKSIOFHMKNSNOIK 60 1 MRNGVDFRHLVLTALLLPATOGKNVYLGGKGDTVEILTCTASOKKSIQHFMKNSNOIK 60	
Oy	IIGNQGSFLTTPGSKINDRADSRHSIMDGPNPLIIKNIKIEDSDTYICEVEDOKEEVQL 120 IIGNQGSFLTTPGSPKINDRADSRHSLMDGNFLLIKNIKIIBESDPYIECEVDQKEEVQL 120	
Dn	121 LVFGFLANSDDTHLLOQSILTLITESPPGSSPVQCSPPRKGINQGAKTLSVSGLRLDSG 180 121 LVFGLTANSDDTHLLOQSILTLITESPPGSSPSVQCSPRKGINQGAKTISVGLRLDSG 180	
Oy	181 TWTCVTILOHQKVFEKIDIY 200	

DB	181	TWICTV	QNGKVEFXIDIV	200
RESULT 10				
AA13491				
ID	AA13491	standard; protein; 458 AA.		
XX				
AC	AA13491;			
XX				
XX	25-MAR-2003	(revised)		
DT	30-OCT-1991	(first entry)		
XX				
DE	Human CD4 encoded by pUD.SCD4.Y187.Snab1 and p170.2.			
XX				
KM	C4bp; gp120; HIV; T lymphocyte; fusion protein.			
XX				
OS	Homo sapiens.			
XX				
PH	Key	Location/Qualifiers		
FT	Peptide	1..25		
FT		/label= signal_peptide		
FT		26..132		
FT	Domain	/label= Ig-related		
FT		/note= "extracellular"		
FT		41..109		
FT	Disulfide-bond	133..202		
FT	Domain	/label= Ig-related		
FT		/note= "extracellular"		
FT		155..184		
FT	Disulfide-bond	203..318		
FT	Domain	/label= Ig-related		
FT		/note= "extracellular"		
FT		319..395		
FT	Domain	/label= Ig-related		
FT		/note= "extracellular"		
FT		328..370		
FT	Disulfide-bond	396..416		
FT	Region	/label= transmembrane		
FT		417..456		
FT	Domain	/label= cytoplasmic		
XX				
PN	WO911461-A.			
XX				
PD	08-AUG-1991.			
XX				
PF	26-JAN-1990;	90US-00470888.		
XX				
PR	26-JAN-1990;	90US-00470888.		
XX				
PA	(BIOJ ) BIOGEN INC.			
XX				
PI	Pasek MP, Winkler G, Liu TR;			
XX				
DR	WPI; 1991-252613/34.			
XX				
DR	N-PSDB; AAQ13243.			
XX				
PT	New C4 binding protein fusion proteins and DNA encoding them - comprise			
XX	assemblies of C4bp monomers linked to functional moiety, e.g. AZT, useful			
PT	as delivery vehicles in diagnosis and therapy.			
XX				
PS	Example 3; Fig 3; 105pp; English.			
XX				
CC	This is the preferred CD4 sequence for use in the construction of fusion			
CC	proteins with C4-binding protein. Truncated, soluble versions of CD4 can			
CC	also be used. The C4bp-CD4 fusion protein may be useful to target AZT or			
CC	similar anti-retroviral agent to HIV-infected cells. See AAQ13242-51.			
CC	(Updated on 25-MAR-2003 to correct PA field.)			
XX				
XX	Sequence 458 AA;			
Query Match	100.0%;	Score 1029;	DB 2;	Length 458;
Best Local Similarity	100.0%;	Pred. No. 3.	8e-76;	

Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNRGVFRLHLVLTQALLPAATQGNKVVLTGKGDVVELTCTASQKKSIOFHKNSNOIK 60  
 DB 1 MNRGVFRLHLVLTQALLPAATQGNKVVLTGKGDVVELTCTASQKKSIOFHKNSNOIK 60  
 QY 61 IICNGQSFLTGPSKLNDRADSRSLMDQGNPFLIIKNKIEDSDTYICEVEQKEEVOL 120  
 DB 61 IICNGQSFLTGPSKLNDRADSRSLMDQGNPFLIIKNKIEDSDTYICEVEQKEEVOL 120  
 QY 121 LVFGLTANSDDLHLLQGSLLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDSDG 180  
 DB 121 LVFGLTANSDDLHLLQGSLLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDSDG 180  
 QY 181 TWTCTVLONQKVEFKIDIV 200  
 DB 181 TWTCTVLONQKVEFKIDIV 200

RESULT 11  
 AAY39826  
 ID AAY39826 standard; protein; 458 AA.  
 AC AAY39826;  
 XX  
 DT 03-DEC-1999 (first entry)  
 XX  
 DE Soluble human T4 protein.  
 XX  
 KW Soluble T4 protein; e74; human; HIV; binding inhibitor; T4+ cell; AIDS;  
 KW vaccine; immunisation; therapy.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US5958678-A.  
 XX  
 PD 28-SEP-1999.  
 XX  
 PF 12-DEC-1994; 94US-00354452.  
 XX  
 PR 21-AUG-1986; 86US-00898587.  
 PR 11-JUN-1991; 91US-00713564.  
 PR 06-JUL-1992; 92US-00909021.  
 XX  
 PA (UYCO ) UNIV COLUMBIA NEW YORK.  
 XX  
 PI McDougal JS, Weiss R, Axel R, Littman DR, Maddon PJ, Chess L;  
 DR WPI; 1999-561025/47.  
 DR N-PSDB; AA220695.  
 XX  
 PT Human T4 protein inhibits HIV binding to T4 cells, useful for treating  
 PT AIDS.  
 XX  
 PS Example 3; Fig 6; 58pp; English.  
 XX  
 CC This sequence represents the soluble human T4 protein of the invention.  
 CC The soluble human T4 protein blocks the binding of HIV to T4+ cells and  
 CC is therefore useful for the treatment of AIDS. Monoclonal antibodies  
 CC against the T4 protein may be used as vaccines for immunising subjects  
 CC against AIDS  
 CC  
 SQ Sequence 458 AA;

Query Match 100.0%; Score 1029; DB 2; Length 458;  
 Best Local Similarity 100.0%; Pred. No. 3.8e-76;  
 Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNRGVFRLHLVLTQALLPAATQGNKVVLTGKGDVVELTCTASQKKSIOFHKNSNOIK 60  
 DB 1 MNRGVFRLHLVLTQALLPAATQGNKVVLTGKGDVVELTCTASQKKSIOFHKNSNOIK 60  
 QY 61 IICNGQSFLTGPSKLNDRADSRSLMDQGNPFLIIKNKIEDSDTYICEVEQKEEVOL 120  
 DB 61 IICNGQSFLTGPSKLNDRADSRSLMDQGNPFLIIKNKIEDSDTYICEVEQKEEVOL 120  
 QY 121 LVFGLTANSDDLHLLQGSLLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDSDG 180  
 DB 121 LVFGLTANSDDLHLLQGSLLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDSDG 180  
 QY 181 TWTCTVLONQKVEFKIDIV 200  
 DB 181 TWTCTVLONQKVEFKIDIV 200

DB 61 IICNGQSFLTGPSKLNDRADSRSLMDQGNPFLIIKNKIEDSDTYICEVEQKEEVOL 120  
 QY 121 LVFGLTANSDDLHLLQGSLLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDSDG 180  
 DB 121 LVFGLTANSDDLHLLQGSLLTLESPPGSSPSVQCRSPRGKNIQGGKTLVSQLELDSDG 180  
 QY 181 TWTCTVLONQKVEFKIDIV 200  
 DB 181 TWTCTVLONQKVEFKIDIV 200

RESULT 12  
 AAB07769  
 ID AAB07769 standard; protein; 458 AA.  
 AC AAB07769;  
 XX  
 DT 07-NOV-2000 (first entry)  
 XX  
 DE DNA encoding a human T4 glycoprotein.  
 XX  
 KW Human; T4 glycoprotein; human immunodeficiency virus; HIV;  
 KW envelope glycoprotein; AIDS; virus binding.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key  
 FH Peptide  
 FT 1..23  
 FT /note= "leader sequence"  
 FT 296..298  
 FT /note= "N-linked glycosylation site"  
 FT 325..327  
 FT /note= "N-linked glycosylation site"  
 FT 398..420  
 FT /note= "transmembrane domain"  
 FT 421..458  
 FT /note= "cytoplasmic domain"  
 XX  
 PN US6093539-A.  
 XX  
 PD 25-JUL-2000.  
 XX  
 PF 06-JUN-1995; 95US-00466368.  
 XX  
 PR 21-AUG-1986; 86US-00898587.  
 PR 11-JUN-1991; 91US-00713564.  
 PR 06-JUL-1992; 92US-00909021.  
 PR 12-DEC-1994; 94US-00354452.  
 XX  
 PA (UYCO ) UNIV COLUMBIA NEW YORK.  
 XX  
 PI Maddon PJ, Chess L, Axel R, Weiss R, McDougal JS, Littman DR,  
 DR WPI; 2000-505203/45.  
 DR N-PSDB; AA59352.  
 XX  
 PT New isolated nucleic acid encoding a human T cell surface protein and the  
 PT soluble surface T4 glycoprotein that it encodes; useful as prophylaxis  
 PT for treating a subject infected with human acquired immune deficiency  
 PT syndrome virus.  
 XX  
 PS Disclosure; Fig 6A-B; 69pp; English.  
 XX  
 CC The present sequence represents a human T4 glycoprotein. An aqueous-  
 CC soluble polypeptide comprising a portion of a human T4 glycoprotein  
 CC specifically forms a complex with a human immunodeficiency virus (HIV)  
 CC envelope glycoprotein. The DNA is useful for producing the soluble  
 CC surface T4 glycoprotein. The soluble surface T4 glycoprotein is useful as  
 CC a therapeutic agent, i.e. as prophylaxis for treating a subject infected  
 CC with an HIV virus. Thus, the soluble T4 glycoprotein is also useful for  
 CC treating human AIDS. The soluble T4 glycoprotein is also useful in  
 CC diagnostic or screening assays, e.g. for screening inhibitors of virus

CC binding, or for detecting and quantitating T4, T4+ cells and antibodies  
CC to T4, which are of diagnostic value for AIDS  
XX  
SQ Sequence 458 AA;  
Query Match 100.0%; Score 1029; DB 3; Length 458;  
Best Local Similarity 100.0%; Pred. No. 3.8e-76;  
Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 NMRGVFPHLLVQLALPAAQGNKVVLGKGGDTVELTCTASQKSIQFHMKNNOIK 60  
DB 1 NMRGVFPHLLVQLALPAAQGNKVVLGKGGDTVELTCTASQKSIQFHMKNNOIK 60  
OY 61 ILGNQGSFLTKGPSKLNDRADSRSLMDQGNFPLIKKIKEDSDTYICEVEDQKEEVOL 120  
DB 61 ILGNQGSFLTKGPSKLNDRADSRSLMDQGNFPLIKKIKEDSDTYICEVEDQKEEVOL 120  
OY 121 LVFGLTANSDFHLQGSGLTLTLESPPGSSPVQCRSPRGKNIQSGKTLVSQLELDQSG 180  
DB 121 LVFGLTANSDFHLQGSGLTLTLESPPGSSPVQCRSPRGKNIQSGKTLVSQLELDQSG 180  
OY 181 TWTCTVLQNGKVEFKIDIV 200  
DB 181 TWTCTVLQNGKVEFKIDIV 200  
RESULT 13  
AAR7277  
ID AAR7277 standard; protein; 462 AA.  
XX  
AC AAR7277;  
XX  
DT 25-MAR-2003 (revised)  
DT 28-JUL-1995 (first entry)  
XX  
DE CD4:eta peptide chimeric protein.  
XX  
KW Fusion protein; CD4; extracellular domain; zeta; eta; gamma;  
KW membrane spanning domain; intracellular domain; type I;  
KW integral membrane homodimer; TCR; T cell antigen receptor;  
KW extracellular domain; mouse; human; receptor; chimera;  
KW HPB-ALL tumour cell line; natural killer cell.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FH Protein 1..399  
FT /note= "CD4 extracellular domain"  
FT Protein 400..462  
FT /note= "Zeta membrane spanning and intracellular domain"  
XX  
PI WO9215322-A1.  
XX  
PN 17-SEP-1992.  
XX  
PD 06-MAR-1992; 92WO-US001785.  
XX  
PR 07-MAR-1991; 91US-00665961.  
XX  
PA (GEHO) GEN HOSPITAL CORP.  
XX  
PI Seed B, Romeo C, Kolanus W;  
XX  
DR WPI; 1992-331474/40.  
XX  
DR N-PSDB; AAQ28705.  
XX  
PT Therapeutic cells expressing chimeric receptors - directing cellular  
PT response to an infective agent, useful in treating HIV-1, AIDS  
PT Pneumocystis carinii infections etc.  
XX  
XX Example 2; Page 73-74; 114pp; English.  
XX  
CC This sequence represents a fusion protein between the CD4 extracellular

CC domain and the eta protein membrane spanning domain and intracellular  
CC domain. Eta is an isoform of zeta (see also AAR7276) which is a 32 kD  
CC type I integral membrane homodimer, which arises by alternate mRNA  
CC splicing. It is present in reduced amounts in cells expressing the T cell  
CC antigen receptor. Zeta-eta heterodimers are thought to mediate the  
CC formation of inositol phosphates, as well as the receptor initiated cell  
CC death called apoptosis. In the production of the CD4 receptor chimera,  
CC the eta cDNA was isolated from the HPB-ALL tumour cell line and from  
CC human natural killer cells. The eta cDNA was joined to the extracellular  
CC domain of an engineered form of CD4 possessing a BamHI site just upstream  
CC of the membrane spanning domain, by a BamHI site naturally present a few  
CC residues upstream of the membrane spanning domain. (updated on 25-MAR-  
XX 2003 to correct PN field.)  
XX  
SQ Sequence 462 AA;  
Query Match 100.0%; Score 1029; DB 2; Length 462;  
Best Local Similarity 100.0%; Pred. No. 3.8e-76;  
Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 NMRGVFPHLLVQLALPAAQGNKVVLGKGGDTVELTCTASQKSIQFHMKNNOIK 60  
DB 1 NMRGVFPHLLVQLALPAAQGNKVVLGKGGDTVELTCTASQKSIQFHMKNNOIK 60  
OY 61 ILGNQGSFLTKGPSKLNDRADSRSLMDQGNFPLIKKIKEDSDTYICEVEDQKEEVOL 120  
DB 61 ILGNQGSFLTKGPSKLNDRADSRSLMDQGNFPLIKKIKEDSDTYICEVEDQKEEVOL 120  
OY 121 LVFGLTANSDFHLQGSGLTLTLESPPGSSPVQCRSPRGKNIQSGKTLVSQLELDQSG 180  
DB 121 LVFGLTANSDFHLQGSGLTLTLESPPGSSPVQCRSPRGKNIQSGKTLVSQLELDQSG 180  
OY 181 TWTCTVLQNGKVEFKIDIV 200  
DB 181 TWTCTVLQNGKVEFKIDIV 200  
RESULT 14  
AAR78677  
ID AAR78677 standard; protein; 462 AA.  
XX  
AC AAR78677;  
XX  
DT 16-APR-1996 (first entry)  
DT 16-APR-1996 (first entry)  
XX  
DE T-cell receptor gamma.  
XX  
KW Chimeric receptor; CD4; T-cell receptor gamma; HIV; cytolysis;  
KW human immunodeficiency virus; adoptive immunotherapy.  
XX  
OS Homo sapiens.  
XX  
PN WO9521528-A1.  
XX  
PD 17-AUG-1995.  
XX  
PR 12-JAN-1995; 95WO-US000454.  
XX  
PR 14-FEB-1994; 94US-00195395.  
XX  
PR 02-AUG-1994; 94US-00284391.  
XX  
PA (GEHO) GEN HOSPITAL CORP.  
XX  
PI Seed B, Banapour B, Romeo C, Kolanus W;  
XX  
DR WPI; 1995-292893/38.  
XX  
DR P-PSDB; AAQ36123.  
XX  
PT Target cytolysis of HIV-infected cells - by chimeric CD4 receptor-bearing  
PT cells.  
XX  
XX Example 2; Page 77-78; 118pp; English.  
XX



CC Fusion proteins comprising the extracellular domain of CD4 fused to T-  
 CC cell receptor zeta, gamma or eta (AAR89457-78, respectively) were  
 CC expressed in CV1 using a vaccine virus vector. These CD4:zeta, CD4:gamma  
 CC and CD4:eta chimeric receptors mediated cytolysis of targets expressing  
 CC HIV gp120/41  
 CC  
 SQ Sequence 462 AA;

Query Match 100.0%; Score 1029; DB 2; Length 462;  
 Best Local Similarity 100.0%; Pred. No. 3.8e-76;  
 Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNRGVFRRHLVLTQALPAATQGNKVVLGKKGDTVELCTASQKKSIOFHKNSNQIK 60  
 DB 1 MNRGVFRRHLVLTQALPAATQGNKVVLGKKGDTVELCTASQKKSIOFHKNSNQIK 60  
 QY 61 ILGNQSSFLTKGPSKLNDRADSRSLMDQGNPFLIKIKIEDSDTYICEVEDQKEEVOL 120  
 DB 61 ILGNQSSFLTKGPSKLNDRADSRSLMDQGNPFLIKIKIEDSDTYICEVEDQKEEVOL 120  
 QY 121 LVFGLTANSDTHLQGSQSLTLTLESPGSSPSVQCSPPRGKNIQGGKTLVSQLELDQSG 180  
 DB 121 LVFGLTANSDTHLQGSQSLTLTLESPGSSPSVQCSPPRGKNIQGGKTLVSQLELDQSG 180  
 QY 181 TWTCVTLQONQKVEFKIDIV 200  
 DB 181 TWTCVTLQONQKVEFKIDIV 200

RESULT 15  
 AAR89457  
 ID AAR89457 standard; protein; 462 AA.

AC AAR89457;  
 DT 26-SBP-1996 (first entry)  
 DE CD4:gamma fusion protein.

KW CD7; transmembrane domain; chimeric receptor; CD5; CD34; CH2; CH3; IgG1;  
 human; CD4; HIV; proteinaceous alpha-helix; T cell; B cell; neutrophil;  
 dendritic cell; therapy; mammal; infection.

OS Synthetic.

PN WO9603883-A1.

PD 15-FEB-1996.

PF 26-JUL-1995; 95WO-US009468.

PR 02-AUG-1994; 94US-00284391.  
 PR 24-FEB-1995; 95US-00394388.

PA (GEHO) GEN HOSPITAL CORP.

PI Seed B, Banapur B, Romeo C, Kolanus W;

DR WPI; 1996-129034/13.

DR N-PSDB; AAT10802.

PT Membrane-bound chimeric receptor comprising extracellular portion  
 including CD4 fragment - cells expressing receptor can be used for  
 treatment of HIV infection.

PS Example 2; Page 79; 134pp; English.

CC AAT10801-T10803 represent membrane bound proteinaceous chimeric receptors  
 CC of the invention. This sequence represents the CD4:gamma chimera. The  
 CC transmembrane region of the chimeric receptor acts to separate the  
 CC intracellular and extracellular domains of the chimera, and contains a  
 CC portion of the CD7 (see AAR89440), CD5 or CD34 transmembrane domains.  
 CC Alternatively, the extracellular portion of the receptor can be separated

CC from the intracellular domain by the hinge, CH2 and CH3 domains of human  
 CC IgG1 (see AAR89441). The extracellular portion of the chimeric receptor  
 CC contains a fragment of CD4 (amino acids 1-394 or 1-200 of the CD4  
 CC sequence, see AAR89450 and AAR89451) which specifically recognizes and  
 CC binds HIV-infected cells, but does not mediate HIV infection. The  
 CC extracellular domain of the receptor is separated from the cell membrane  
 CC by 48 or 72 angstroms, or by one or more proteinaceous alpha-helices. The  
 CC cells expressing the receptor are preferably T cells, B cells,  
 CC neutrophils, or dendritic cells. The therapeutic cells expressing the  
 CC chimeric receptor are administered to a mammal to treat HIV infection  
 CC  
 SQ Sequence 462 AA;

Query Match 100.0%; Score 1029; DB 2; Length 462;  
 Best Local Similarity 100.0%; Pred. No. 3.8e-76;  
 Matches 200; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNRGVFRRHLVLTQALPAATQGNKVVLGKKGDTVELCTASQKKSIOFHKNSNQIK 60  
 DB 1 MNRGVFRRHLVLTQALPAATQGNKVVLGKKGDTVELCTASQKKSIOFHKNSNQIK 60  
 QY 61 ILGNQSSFLTKGPSKLNDRADSRSLMDQGNPFLIKIKIEDSDTYICEVEDQKEEVOL 120  
 DB 61 ILGNQSSFLTKGPSKLNDRADSRSLMDQGNPFLIKIKIEDSDTYICEVEDQKEEVOL 120  
 QY 121 LVFGLTANSDTHLQGSQSLTLTLESPGSSPSVQCSPPRGKNIQGGKTLVSQLELDQSG 180  
 DB 121 LVFGLTANSDTHLQGSQSLTLTLESPGSSPSVQCSPPRGKNIQGGKTLVSQLELDQSG 180  
 QY 181 TWTCVTLQONQKVEFKIDIV 200  
 DB 181 TWTCVTLQONQKVEFKIDIV 200

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